

Elements of Middle and Long Distance Training

Lexington Girls
Indoor Track Team
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Long-term Workout Goal

- Before we begin, though, a plug for an **unofficial sixth workout**: the easy run. Too many runners, are hell bent on increasing speed and mileage, completely overlook the importance of the easy run, often running themselves into injury.
- Your body needs a chance to rest, so make sure that somewhere between those killer hill workouts and gutsy interval sessions you manage to squeeze in some rest -- and plenty of it. Give yourself at least two easy days per week. Run a relatively short distance, at a pace that seems almost too slow. Or just take the day off and only stretch. Above all, listen to your body. When your legs feel like dead weights, they need some time to recover. Recovery (i.e. the easy run) is probably the most important piece of a good training program, and it should not be dismissed. However hard you push yourself during your other days of "quality runs," make sure you give yourself a chance to recover.
- Always be in the "monitoring what your body is telling you" mode. If you feel tired and your body aches then you are tired and unable to train hard.
- If school work or other stresses are getting to you then you are tired and unable to train hard. Be realistic and level headed so your training can progress smoothly.

Five Building Blocks + One

- Fartlek (Swedish for "speed play")
- Intervals
- Hills
- Tempo runs
- Extended runs
- (Rest or easy run)

Fartlek

- Fartlek is almost as much fun to do as it is to say. "Fartlek" is Swedish for "speed play" and consists of bursts of speed in the middle of a training run. Essentially, it's an unstructured interval session, your self created training without the rules. Fartlek gets your legs used to a variety of paces and in the process gives you an enhanced awareness of your ability to keep up those paces at various distances.
- After warming up, run at an easy training pace, throwing in bursts of speed for various distances throughout the run. Vary the speed and times of the speed sections, from as short as 15 seconds to as long as two or three minutes. Between these bursts, allow yourself enough recovery time to match roughly 2/3 of the effort time. The recovery pace, though, should be faster than the recovery jog you might do during intervals on the track; keep it moving at an easy training pace.
- It's a good idea to pick out a landmark -- a tree or a fire hydrant or a bend in the path -- where a speed section will end before you start picking up the pace. In other words, you have to know how far you are running for each section. Because the idea is to keep up a constant pace until you reach that landmark, it is important to pace yourself at the beginning. Don't tear off so fast that you cannot keep up the pace through the end of each speed section.
- A fartlek session can be as easy or as difficult as you wish to make it. Use fartlek for anything from a light recovery run to a grueling workout. As always, however, start out easy. Your first fartlek sessions should contain distances and paces that you feel comfortable with and that you feel you can gradually increase in future sessions. A twenty to thirty-minute fartlek session should be adequate for most runners. There is very little reason for them to go as long as 45 minutes. Take it easy, be patient.

Hills

- For many runners, hills spell trouble. Fortunately, much of that sentiment is more in their heads than their legs. Running hills is an acquired skill, and a little practice can give any runner the confidence to overcome her hill phobia and make peace with the dreaded incline. And not least, a consistent regimen of hill workouts goes far to build leg strength.
- The muscle groups you use to overcome hills are virtually the same as those you use for sprinting, so hill work enhances your speed. This strengthening effect is supplemented by the fact that hill workouts help increase both the frequency and length of your stride -- you get even faster. As a final added bonus, hill training also strengthens the muscles around your knees, helping to reduce knee injuries.
- You should, however, be cautious about hill work if you have an injury in your calf or Achilles tendon. Even if you do not, you should still be sure to stretch these areas of your legs especially well before starting.

While speed work programs are built around running sprint repeats on one hill, there's no particular reason that you should stick to this. Running a rolling course with numerous hills will also do the trick while adding the change of scenery that makes running so pleasurable.
- Wherever you choose to run, make sure that the course will give you the opportunity to run at least five or six hills 300 meters long or more.

Hills continued

- Remember that the idea of hill work is to negotiate the hills efficiently, with as little disruption as possible to your rhythm. Think of yourself rolling over the hill, almost as if it isn't there. Concentrate on keeping your upper body relaxed, while you let your legs do the work. While you don't have to attack the hill, you should still work it and pour on some effort. On gradual inclines, try to run a bit faster than you had been running on the flat before the hill. On steeper inclines, concentrate on lifting your knees and pushing off hard with every step. This attention to your "vertical" motion is at least as important as your forward motion up the hill. The steeper the hill, the more you should lift your knee; on the steepest inclines try to lift your knees so high that your thighs reach horizontal. The strong push-off and high knee lifts will increase both your stride length and the range of motion in your hips: voila, you've increased your speed.
- As you reach the steeper section of each hill, focus on running all the way over this slope until you reach the flat, and pick up your regular running rhythm again. Use the flat or downhill on the other side for recovery. As always during the easy portion of any speed work, keep running - even if at a gentle jog. Go carefully on the downhills - they can dish out a nasty pounding, particularly to your quads. The best way to run downhills is to lean into them, to the point that you feel you're about to fall on your face. Try to get your legs turning over as fast as you can with short, quick strides. Not only does this help reduce the pounding on your legs, but it also helps you increase your stride frequency. With a little practice, you'll find yourself running down hills with less effort, less pounding, and more speed, not a bad combination. Those just beginning hill workouts will likely find hills a struggle at first, but before long hills become more of a friendly challenge. The more you run hills, the more you'll find yourself adjusting to them automatically and your stride shifting to "hill mode" without any thought or effort.

Intervals

- While most elite runners get their start on the track, many of us came to running by way of local roads, sidewalks and forest paths. For the average runner, the track seems all too intimidating, almost scary. Fact is, though, that the track is not simply the domain of the accomplished runner. Any runner at any level can improve her performance with a little help from the oval. This is what intervals are about.
- Interval sessions are the most formal of speed workouts in that the distances and target paces are precisely fixed before you run. The idea is to run a series of relatively short repetitions over distances from 145m to 1600m, with rest periods of slower running in between. Because of their very nature, intervals involve a shorter period of effort than your race distance at a pace slightly faster than that race pace. This allows you to run faster than you usually do, adapting your body to higher demands and your leg muscles to faster turnover. Over time, you become more physiologically efficient.
- Because of the clearly measured distances, the track is an ideal place to do intervals, but some may find the never-changing scenery to be, well, maybe just a little dull. In that case, you should feel free to duplicate interval workouts with more controlled “Fartlek” to do your intervals on the road, using permanent landmarks to measure distance. The various distances, as you might guess, are each best suited to runners with specific goals. The 145m run (1 lap), 200m run (1&1/3 lap) is best for short-distance training (600m and under) to improve speed. The 290m (two lap) helps improve overall conditioning at slower but still a fast pace for final race preparation. The 435m (3 laps) to 725m (7 laps) distances are used to develop tempo, form and pace when training for 100m, 1 mile & 2 miles.

Tempo Runs

- This is hands-down the least complicated variety of speed work. There are no distances to keep track of, no split times to remember, no hassles. All you have to do is run faster than your usual training pace. Unlike most speed work which consists of relatively short bursts of high effort, tempo runs call for a single sustained effort. The result is that your body learns race economy: running at a fast pace for relatively long periods of time.
- By running nearly at race pace, your body becomes accustomed to running close to its upper limit (though not exceeding it). In doing so, you actually increase that upper limit, and you become gradually faster. After your usual warm-up routine, run at your easy training pace for at least ten minutes. Then pick up the pace. As mentioned above, this speed should be right around your maximum heart rate for your training level. (see Training Effort Scale Chart). The time, distance and pace of your tempo run, as with all phases of your running, depends on you and your ability (not to mention your goals). For the distance you choose, find a pace that is not so fast that you cannot sustain it for the distance, but not so slow that you do not feel challenged toward the end. Tempo runs should be tough, but not impossible.
- Depending on how you feel on any given day, how much spring is in your legs, and how far you are running, your tempo pace may vary from session to session. That's fine. The consistency that counts is the pace within each session. Try to keep your speed level for the full length of each tempo run. Don't worry too much about figuring out the exact distance of your tempo run. It's really not terribly important. The one value of knowing how far you are running, though, is that you are able to gauge your improvement over time. Still, this is easily done by doing most of your tempo runs on the same route. You may not know the specific distance, but you can still compare your times for that same fixed route.

Long Runs

- In your rush to build speed, don't forget the all-important long run. Especially for the distance runner but also for short-distance speedsters, the long run is the essential foundation for building and maintaining stamina. Don't give it short shrift. Build a long run into your routine every other week (weekend mornings are perfect). Make the distance anywhere up to 3 miles for middle distance runners and 4-6 miles for distance runners. Jog or trot at your normal easy effort training pace, again see Training Effort Scale. You have to build distance gradually to give your body a chance to adjust to the pounding of those extra miles. As long as you are not picking up your speedwork very suddenly at the same time, you should be able to add 5-10% to your long run every two weeks. This may seem like a painfully slow rate of increase, but it's a lot less painful than the injury you might otherwise risk. Take it slow, it's better than being sidelined for several weeks.

10 % Rule

- As always, keep in mind the oft-repeated 10-percent rule. Your total training mileage should not increase more than 10 percent from week to week.

Training Effort Scale

<u>Scale</u>	<u>Description</u>	<u>Effort Comparison</u>	<u>Indicators</u>
• 6	VERY EASY	Cool down jog	Talking, laughing, singing
• 7			
• 8	EASY	Warm up jog	Talking, laughing
• 9	Beginner	40-45% Average 50-55%	Fit 60-65%
• 10	MODERATE	Easy workout	Talking
• 11			
• 12	SOME STRESS	Normal Workout	Talking short sentences
• 13	Beginner	50-60% Average 60-70%	Fit 75-85%
• 14	HARD	Occasional Workout Effort	Talking a few words
• 15			
• 16	VERY HARD	Controlled Competitive	One word verbalization
• 17	Beginner	70-75% Average 80-85%	Fit 90-95%
• 18	VERY VERY HARD	Competition	Focus on breathing
• 19			
• 20	MAXIMUM EFFORT	Competition	Focus on breathing

Determining Training Effort

- Average Teen age 16 with resting heart rate of **66**
- α Intensity - From chart above Average 60-70%
- $HR = \text{Heart Rate}$
- **Minimum Heart Rate**
- $220 - \text{Age} = \text{Maximum Heart Rate}$ $220 - 16 = 204$
- $((\text{Maximum Heart Rate} - \text{Resting Heart Rate}) \times \alpha \text{ Intensity}^*) + \text{Resting HR} = \text{Training HR}$
- $(204 - 66) \times .60 + 66 = 148$
- **Maximum Heart Rate**
- $220 - \text{Age} = \text{Maximum Heart Rate}$ $220 - 16 = 204$
- $((\text{Maximum Heart Rate} - \text{Resting Heart Rate}) \times \alpha \text{ Intensity}^*) + \text{Resting HR} = \text{Training HR}$
- $(204 - 66) \times .70 + 66 = 162$
- Target range while training 148-162.
- Below 148 = less than optimal
- Above 162 = over train, dial back effort 10% on next effort

Heart Rate Conversion Chart

- **BEATS/10SEC** **HEART RATE** Start counting at zero and judge # beats in ten(10) seconds. I do NOT recommend using a six second interval unless you do not know your X10 multiplication table.

- Beats/10seconds Heart Rate/minute

- 8	48
- 9	54
- 10	60
- 11	66
- 12	72
- 13	78
- 14	84
- 15	90
- 16	96
- 17	102
- 18	108
- 19	114
- 20	120
- 21	126
- 22	132
- 23	138
- 24	144
- 25	150
- 26	156
- 27	162
- 28	168
- 29	174
- 30	180

Credits

- I am gratified for an Article by **Time-to-Run Cape Town** resident coach [Dave Spence](#)
- Dave presented a very clear articulation of the five building block necessary to build a distance. I have used this article as a beginning base upon which I built this presentation for our team. Thank You Dave!
- I also would like to thank all the coaches I have had through the years and all the coaches that have shared their training thoughts with me via print or spoken words of wisdom. Bill O'Connor, Arthur Dulong, Chuck Woods, Bill Babcock, Jeff Glew, Kate Waller, Lindsay Mosca, Kevin Kelly, Tom Wittenhagen, Ken Feit, John DeComandrea, Jim Duff and Matt Carr to name just a few of my ML-10 and MSTCA coaching colleagues.
- Finally a very special thanks to my daughter Kerri who went from amazing runner to accomplished coach and meet organizer. Kerri our discussions help me test my ideas against an experienced reality. Your feedback helps me convert them to reality.
- Oh, “Buddy”, your patience and place at my feet while I work on the computer should not go unrecognized. Oh OK “Buddy” lets take that walk now!!

